



KONAMI

®

ORIGINAL VIDEO GAME

# OPERATOR'S MANUAL



INTERACTIVE TM



- Failure to operate the machine correctly could result in malfunction or accidents, so please read this manual carefully before commencing operation. Be sure to operate the machine as described in this manual.
- Keep this manual carefully so as to be ready for use when necessary.

Part#829400

**KONAMI®**



# About this product

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Thank you for purchasing this KONAMI product. This manual explains how to operate your game machine correctly and safely.



- Failure to operate the game correctly could result in malfunction or accidents, so please read this manual carefully before commencing operation. Be sure to operate the game as described in this manual.
- Be sure to use this product together with the "The Simpsons Bowling™" Ttrackball unit.
- Carefully handle this manual so it can be ready for use when necessary.
- If the game remains in malfunction, immediately turn OFF the game machine's power switch, unplug the power cord, and contact your nearest dealer.

- This software product is compatible with KONAMI's PCB unit "GQ829™". Never use this software for any other units.
- This manual provides the kit conversion information for a general purpose cabinet.

- The specifications of this product are subject to change without notice for reasons such as improving the performance.
- The contents of this game, its main devices and design are protected under each law concerning patent, copyright and other intellectual properties.
- Unauthorized reproduction of this document or any of its contents is strictly forbidden.

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# ■ Precautions for use

The following safety precautions are used throughout this manual. They must be strictly followed to protect those who install, use or maintain the "The Simpsons Bowling™" as well as to prevent injury and property damage.

## Be sure to read the following

- The following suggestions show the degree of danger and damage caused when the product is used improperly with the suggestions disregarded.



### WARNING

Indicates a situation where disregarding the suggestions could result in death or serious injury.



### CAUTION

Indicates a situation where disregarding the suggestions could result in injury or product damage.

- The following graphic suggestions describe the types of precautions to be followed.



Indicates a matter of which care should be taken.



Indicates a matter which is forbidden.



Indicates a matter which should be performed without fail.

- Definitions of qualified in-shop maintenance persons and industry specialists who handle this product.

- In this instruction manual, some procedures require a qualified in-shop maintenance person or industry specialist. For such instructions, a qualified person must perform the work. Otherwise an electric shock, machine trouble, or a serious accident may result.
- Replacing the machine parts, inspecting and maintaining the machines, and troubleshooting must be assigned only to a qualified in-shop maintenance person or industry specialist. This booklet gives instructions that hazardous jobs in particular must be handled by an industry specialist. Qualified in-shop maintenance persons and industry specialist are defined as follows.

### Qualified in-shop maintenance persons

- A qualified in-shop maintenance person must have experience in maintaining amusement machines, money changers and the like. Under the supervision of an amusement machines shop owner or manager, he or she routinely assembles, installs, inspects and maintains the amusement machines, or replaces their component units and consumable parts, in the amusement machines workshop and/or shop.

### Jobs handled by qualified in-shop maintenance persons

- Assembling, installing, inspecting and maintaining amusement machines and money changers, and replacing their component units and consumable parts.

### Industry specialist

- An industry specialist must be engaged in designing, manufacturing, inspecting and servicing amusement machines. Or he or she must have an education in electrical, electronic or mechanical engineering, and routinely maintain and repair amusement machines.

### Jobs handled by industry specialist

- Assembling and installing amusement machines and money changers, and repairing and adjusting their electrical, electronic and mechanical component parts.

## Installation

### WARNING

• Failure to handle this product correctly may result in malfunction or accident. Before installation, be sure to carefully read the this manual. For installing the PCB unit and the game software (CD-ROM), ask a qualified industry specialist or contact your nearest dealer. (You will be charged.)

• Handle the PCB unit with due care when installing it.

• Improper handling may cause kit trouble or accident.

• Parts inside the PCB unit get hot during operation. Do not touch them until they have completely cooled down.

• The PCB unit has some sharp projections inside. Do not put your hand in the kit because you may get injured.

• The PCB unit and the game software (CD-ROM) are for indoor use. Do not install it in any machines that are used outdoors.

• Outdoor use may cause an accident or kit trouble.



• Do not leave the PCB unit and the game software (CD-ROM) in any of the following places.

• Otherwise an accident or malfunction may result.

• In a place exposed to rain or moisture. • In a place exposed to strong vibration.

• In a place exposed to direct sunlight. • In a place exposed to excessive dust.

• In a place exposed to direct heat from air-conditioning and heating equipment, etc..

• Near equipment generating strong magnetism or electric waves.

• Near hazardous flammable substances such as thinner and kerosene.

• Do not place containers holding chemicals or water on or near the PCB unit and the game software (CD-ROM).

• Electrical shock or damage could be caused by water or foreign matter entering the inside of the kit.



• Be sure to turn OFF the machine's power switch before mounting and removing the PCB unit.

• Otherwise machine trouble or electric shock may result.

• Before installing the PCB unit, clean the inside of the machine using a vacuum cleaner or the like.

• If the electrical components are left covered with dust, an electric shock or fire may result.

• The PCB unit card edge connector conforms to the JAMMA standard requirements. Never connect any other types of connectors than specified.

• Otherwise, machine trouble or fire may be caused.



• In setting up the PCB unit, identify all the connectors and connect them properly. Never handle them with wet hands.

• Otherwise, an electric shock, machine trouble or fire may result.



### CAUTION

• The game software (CD-ROM) are designed for the game pcb unit. Never use them for any other units.

• Machine trouble may result.

• Be careful to keep the game software (CD-ROM) free of water, fingerprint, stain, scratches, etc..

• The game may fail or a malfunction or trouble may result if the CD-ROM is damaged.

• When placing the game software (CD-ROM) in the machine, make sure that its label (on which the title and other information are printed) faces upward.

## Operation



### WARNING

- If smoke, an unusual smell or noise comes out of the PCB unit, immediately turn OFF the machine's power switch and unplug the power cord.



Do not operate the kit.

- Using the kit in abnormal conditions could result in fire or accident.

#### In case of abnormality

- 1 Turn OFF the machine's power switch.
- 2 Unplug the machine's power cord from the receptacle.
- 3 Contact your nearest dealer.

- Make sure all the connectors are tightly connected and not covered with dust.

• Otherwise, electrical shock or fire could result, so inspect the power cord periodically.



- Do not touch the PCB unit with wet hands.

• Otherwise, an electric shock may occur.

- Do not take out or insert the game software (CD-ROM) while the PCB unit is running.

• Otherwise the machine will not function.

- Be sure to use the cd-rom that is compatible with the game software (CD-ROM).

• If an unspecified type is used, the cd-rom data will not load and the game will not operate properly.

- Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodelling.

• Otherwise, a fire, malfunction or trouble may result.

In case of any trouble, ask your nearest dealer for repairs and other services.



KONAMI will not assume any responsibility for damage to the product attributable to disassembly or repair of parts which are not indicated in this manual, as well as settings and remodelling.



### CAUTION

- Do not use this product anywhere other than industrial areas.



• Use in a residential area or an area next to a residential area could affect signal reception of radios, television sets, telephones, etc..

- The following users should not play the game.

• Doing so could cause accidents or illness.

• Those under the influence of alcohol.

• Those suffering from or being treated for arm or wrist ailments.

- Never connect and disconnect the connectors to and from the machine with wet hands.

• Doing so could result in electrical shock.



- In handling the cables of the machine and the PCB unit, follow the instructions below.

• Otherwise an electric leak, fire or electric shock may result, or the machine may fail to function.

• Do not damage the power cord.

• Do not modify the power cord.

• Do not bend the power cord excessively.

• Do not twist the power cord.

• Do not heat the power cord.

• Do not pull the power cord.

• Do not bind the power cord.

• Do not tread on the power cord.

• Do not sandwich the power cord.

• Do not drive a nail into the power cord.

- If by any chance any of the machine or PCB unit connectors or any of the cables is found damaged, immediately stop using the machine and contact your nearest dealer.

• Using damaged connectors and cables could result in fire or electrical shock.

## Inspection and cleaning

### WARNING

- Before inspecting or performing maintenance on the PCB unit or replacing the security cassette, be sure to turn OFF the machine's power switch and unplug the power cord.
  - Failure to do so could result in electrical shock.
- When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.
  - Using improper parts could result in fire or equipment failure.
- Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodelling.
  - Otherwise, a fire, malfunction or trouble may result.
- In case of any trouble, ask your nearest dealer for repairs and other services.  
KONAMI will not assume any responsibility for damage to the product attributable to disassembly or repair of parts which are not indicated in this manual, as well as settings and remodelling.
- To clean the control panel and the Trackball, wipe them with a soft cloth dampened in a neutral detergent and well wrung.
  - Using organic solvents such as thinner may decompose the material.
  - Electrical shock or equipment failure could be caused by water entering the inside of the kit.



## Moving and transportation

### CAUTION

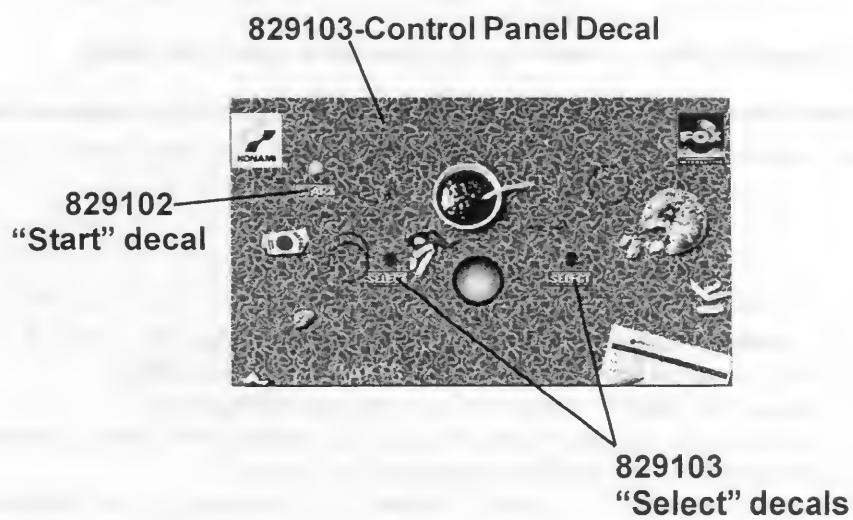
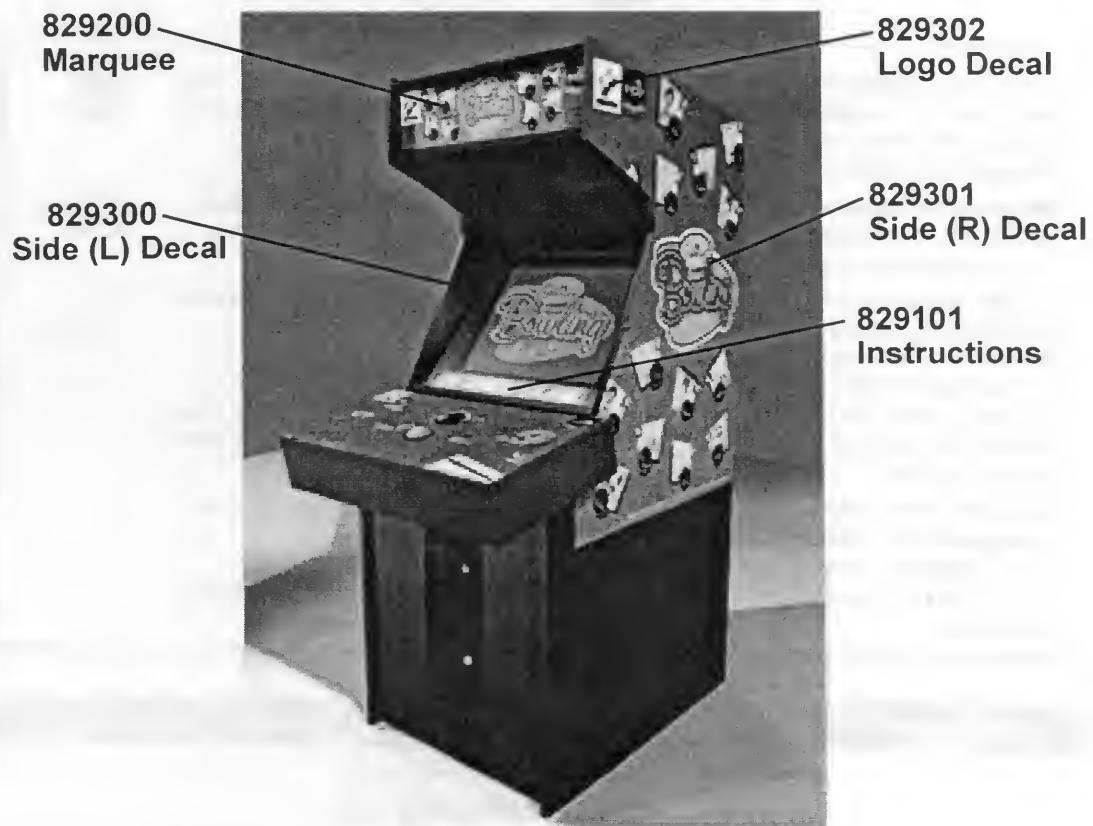
- Use due care in transporting and handling this kit, which is a precision device.

### PRECAUTION IN HANDLING

- When setting up, handling, inspecting, maintaining, moving or transporting this product, follow the procedures and instructions set forth in this manual and perform such work safely.
- Do not remove labels of "WARNING", "CAUTION", etc. attached to the product.
- Do not set up, handle, inspect, maintain, move or transport this product under conditions equivalent to the condition of "WARNING" or "CAUTION" specified in this manual.
- If a new owner is to have this product as a result of transfer, etc., be sure to give this manual to the new owner.

# 1 Decals: part numbers and placement

## 1-1 General-purpose cabinet with decals



## 1-2 Specifications



- Use this product with a compatible trackball unit that is dedicated for the "The Simpsons Bowling™" game.
- No sound volume control is provided on the PCB unit. Adjust the sound volume in the "SOUND OPTIONS" screen in the manual test mode. (See page 15.)  
The speaker terminals of cabinets by manufacturers other than KONAMI may be incompatible in the specifications.

### Specifications

Name	"The Simpsons Bowling™"	
Parts Included	• Instruction manual .....	This manual
	• Complete PCB .....	1
	• Wiring Harness.....	1
	• Trackball.....	1
	• Trackball Plate.....	1
	• Decal set.....	1
	• Buttons.....	3

### PCB Specifications

Dimensions	H:5 3/4" / W:11 3/8" / D:11 5/8"
Weight	PCB unit : Approx. 9.9lb
Power	5V-3A 12V-3A
Operating voltage	5V±5%(4.75~5.25V) 12V±5%(11.4~12.6V)
Service condition	Temperature 41 to 122½F, Humidity 20 to 80% (No dewing is allowed)

- If any part is defective or not found, contact your nearest dealer.
- The specifications of this product are subject to change without notice for reasons such as improving the performance.

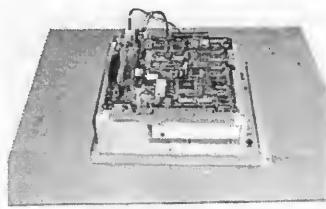
## 2 Installing the kit in the machine

### 2-1 Installing the PCB unit

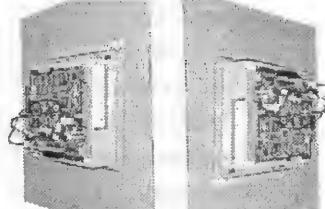
Using wood screws, attach the PCB unit tightly to the floor or internal wall of the game cabinet.  
(Prepare the screws yourself because the kit does not come with those wood screws.)



- Before installing the PCB unit, ask a qualified industry specialist or contact your nearest dealer. (You will be charged.)
- Before installing the PCB unit, be sure to turn OFF the machine's power switch and unplug the power cord from the receptacle.
- Before installing the PCB unit, clean up the inside of the machine using a vacuum cleaner or the like.
- Never mount the PCB unit facing downward. The game may fail to work or the machine may get in trouble.



Jamma Connector  
Horizontal Setup



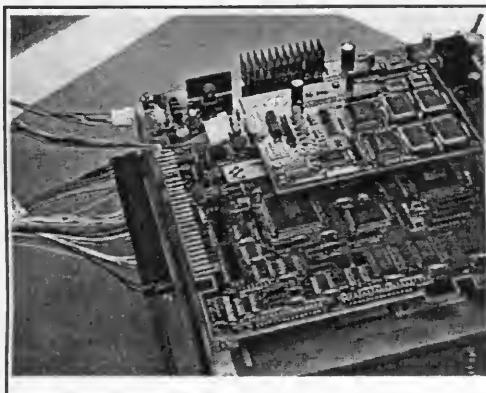
Jamma Connector  
Vertical Setup

### 2-2 Connecting the connectors



- Before connecting the connectors, be sure to turn OFF the machine's power switch and unplug the power cord from the receptacle.

#### ■ Jamma, sound and trackball connections



## 2-3 Installing the Trackball unit

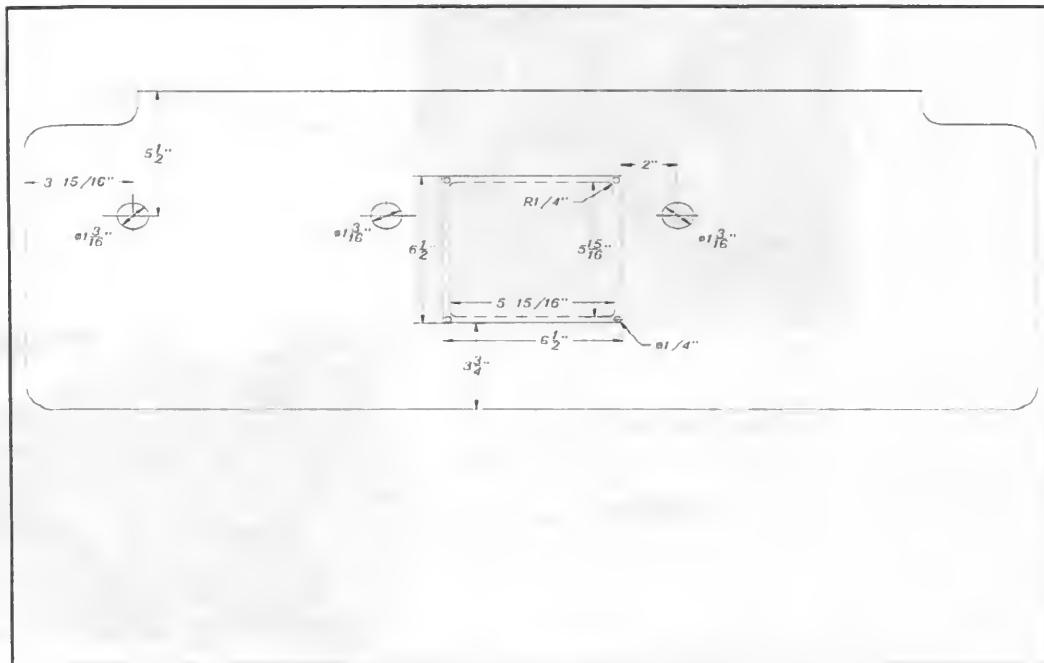
Here is how to install the Trackball unit onto the control panel of a general-purpose cabinet.



- Take care not to apply any load or impact to the machine's panel when it is open.
- When closing the machine's panel, be sure to support it with your hands. Never utilize its dead-weight to close it.
- When closing the machine's panel, take great care that your fingers, etc. are not pinched.

**1** Open the control panel of your general-purpose cabinet. Please note there are many general-purpose cabinets and they are quite different in some ways. So approach the installation of your kit into your cabinet accordingly.

**2** Prepare control panel on your general-purpose cabinet to accomodate the Trackball and Trackball plate using the measurements provided below as a guide.



### 3 Game Settings

#### 3-1 Installing the game software

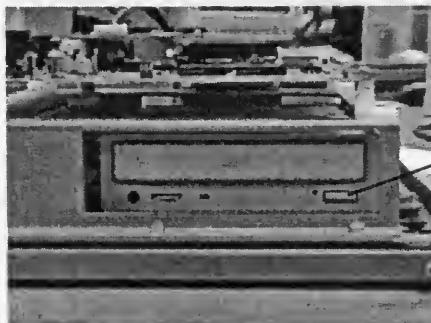
For the "GE829" unit, be sure to use KONAMI's "GE829"-compatible game software (CD-ROM).



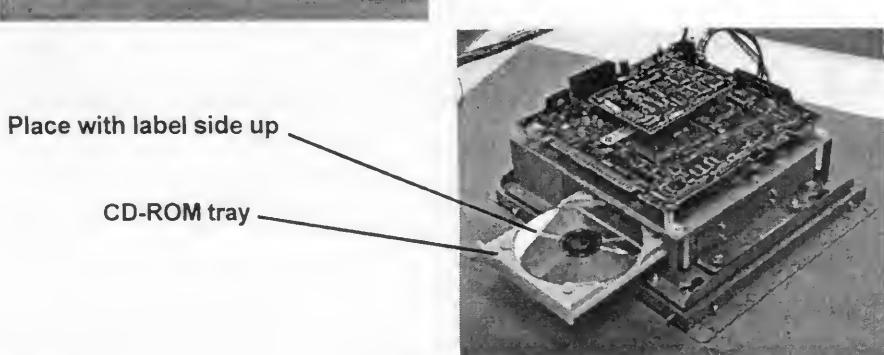
- To replace the CD-ROM, be sure to ask a qualified industry specialist or contact your nearest dealer. (You will be charged.)
- Do not take out and insert the game software while the PCB unit is running.
- Before inspecting or maintaining the PCB unit be sure to turn OFF the machine's power switch and unplug the power cord.
- Be sure to use the compatible game software (CD-ROM).
- The game software (CD-ROM) is designed for the "GE829" unit. Never use them for any other units.
- Be careful to keep the game software (CD-ROM) free of water, fingerprint, stain, scratches, etc..
- When placing the game software (CD-ROM) in the machine, make sure that its label (on which the title and other information are printed) faces upward.

##### ■ How to install the game software (CD-ROM)

- 1 | Turn OFF the machine's power switch.
- 2 | Connect the following connectors to the PCB unit.  
· Connect the JAMMA connector.
- 3 | Turn ON the machine's power switch. Open CD-ROM tray door by pressing the EJECT button to draw out the CD-ROM tray. Insert game software (CD-ROM) and depress the Test Switch until "CHECKING EEPROM" appears.



EJECT button



Place with label side up

CD-ROM tray

## 3-2 Checking the game performance

When this kit has been set up, turn ON the machine's power switch. The PCB unit will be automatically checked for its performance. The test results will be displayed on the screen.



- Before use, be sure to check the performance of the PCB unit.
- If an abnormality persists or the machine does not operate properly, immediately turn OFF the machine's power switch, unplug the power cord from the receptacle and contact your nearest dealer.

### ■ Result of test -----

#### — If test is OK —

- The machine goes to the game mode and the demonstration game begins.

When the game software (CD-ROM) has been set and then the power switch turned ON, it takes about 10 minutes to transfer the program to the FLASH-ROM and to get the machine started.

#### — If any abnormality is detected —

- "BAD" appears on the screen, and the checking is repeated.

If "BAD" appears in the "FLASH ROM CHECK" screen, press the machine's Test Button or the PCB unit's Test Button. The program will be transferred again to initialize the FLASH-ROM data. It will take about 10 minutes to transfer the program.

If "HARDWARE ERROR" appears, immediately turn OFF the machine's power switch and check to see if the CD-ROM is properly inserted in the PCB unit. This PCB unit can only be used by inserting the accompanying CD-ROM. The CD-ROM of any other game does not work to run this PCB unit.

When the machine has been installed or the PCB unit has been repaired or replaced, hold down the machine's Test Button or the PCB unit Test Button and turn ON the machine's power switch. The settings will revert to the factory ones.

Hold down the test button until "TEST SWITCH IS STILL ON. RELEASE IT" shows up on the screen. (The settings in test mode will be back to the factory ones.)

When the settings have returned to the factory ones, be sure to check the settings of the Trackball unit. (See page 14)

If any indication other than above shows up or the machine does not work, immediately turn OFF the machine's power switch, unplug the power cord from the receptacle and contact your nearest dealer.

### 3-3 Setting and adjustment of game mode

Manually check and change the settings for the screen displays and game contents.

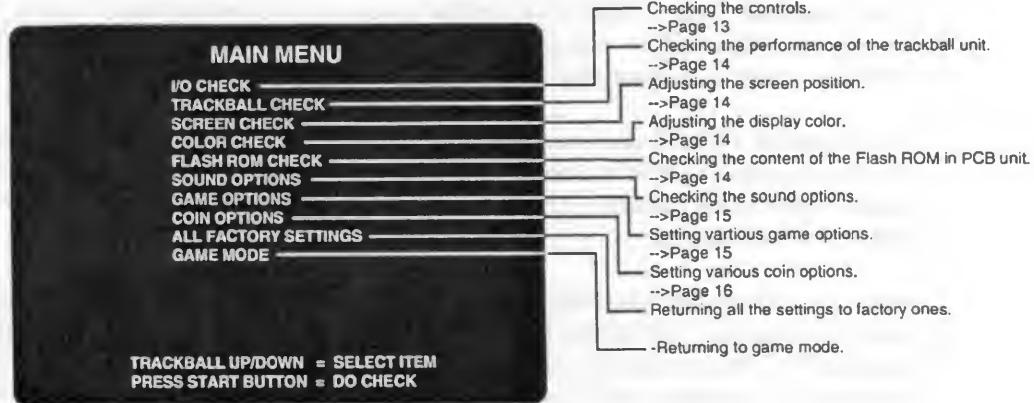
#### ■ Starting the test mode

- 1 Turn ON the machine's power switch.
- 2 During the demonstration game, press the machine's Test Button or the PCB unit's Test Button.  
(If the power switch is turned on with the Test Button down, the current settings will be erased and replaced by the factory settings.)  
•The manual test mode is called and the main menu appears on the screen.

#### ■ Quit the test mode

- 1 Move the Trackball up and down to select "GAME MODE" on the main menu screen.
- 2 Press the Start Button.  
•The screen goes back to the game mode.

#### ■ Main menu screen (basic items)



#### ■ Selecting each mode

How to select each mode from the main menu

•SELECT ITEM -----> Move the Trackball up and down.

•DO CHECK-----> Press the Start Button.

•The machine is now in the selected mode.

•MODIFY SETTING-----> Press Button1 or Button2

## 3-4 Mode descriptions

- The original factory settings are displayed in green; the changed settings are displayed in red. Move the Trackball up and down to select an item to be modified, and press Button1 or Button2 to modify settings.
- After the settings have been modified, select "SAVE AND EXIT" and press the Start Button. The new settings are saved automatically and the screen returns to the main menu.
- If "EXIT" is selected after the settings have been changed, the message "YOU DID NOT SAVE. DO YOU WANT TO SAVE? YES/NO" will appear. Move the Trackball right or left to select "YES" or "NO" and press the Start Button.
- If "YES" is selected, the message "NOW SAVING" will appear, the modified settings will be saved and the screen will return to the main menu.
- If "NO" is selected, the message "NO MODIFICATION" will appear. The modified settings will not be saved, but the main menu will show up again on the screen.

- If "FACTORY SETTINGS" is selected and the Start Button is pressed, all the settings of the mode will be restored to the factory ones.

### MEMO

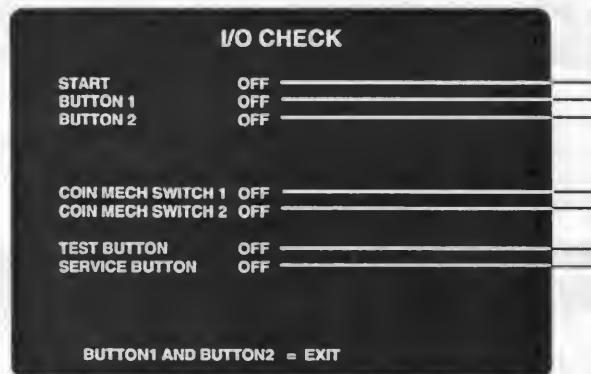
## I/O CHECK

### Checking the controls

- Mode for checking the performance of each control.

When any control switch is pressed, "1" appears on the screen.

To return to the main menu screen, press Button1 and Button 2.



Displays ON/OFF according to the input  
 ON ..... Switch turned ON.  
 OFF ..... Switch turned OFF.

• This screen is just an example.

- On the "I/O CHECK" screen, the gray-displayed items are not used.

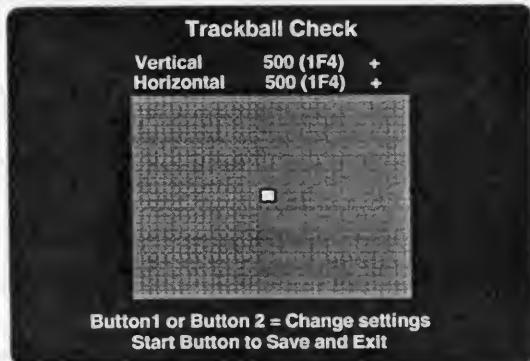
### MEMO

## TRACKBALL CHECK

### Setting the Trackball unit

■ Mode for identifying and checking the Trackball unit.

When the Trackball unit has been replaced it is necessary to identify the vertical and horizontal position settings of the Trackball. Pressing Button1 or Button2 changes the Trackball's vertical and horizontal to the appropriate position values. This is in case Trackball is mounted in a reversed position.



**Note:** This kit includes two Trackball wiring connections. Please use only one of the connections. The other one will not be used.

## SCREEN CHECK

### Adjusting the screen width

■ Mode for checking the screen display.

Adjust the width and factors of the monitor screen while watching the crosshatch pattern.

Use the machine's monitor adjustment PCB to make the adjustments.

To return to the main menu screen, press the Start Button.

## COLOR CHECK

### Adjusting the display color

■ Mode for checking the display color.

Make the adjustment using the machine's monitor adjustment PCB so that the colors of the color bars should appear properly graduated and background should become sufficiently black.

To return to the main menu screen, press the Start Button.

## FLASH ROM CHECK

### Checking the content of the FLASH-ROM

■ Mode for checking the Flash Roms on the game PCB unit.

If the flash roms are fine, "OK" is displayed; if the flash roms are not fine, "BAD" is displayed. Once you press Start to enter the Flash Rom Check mode, the check is automatically started.

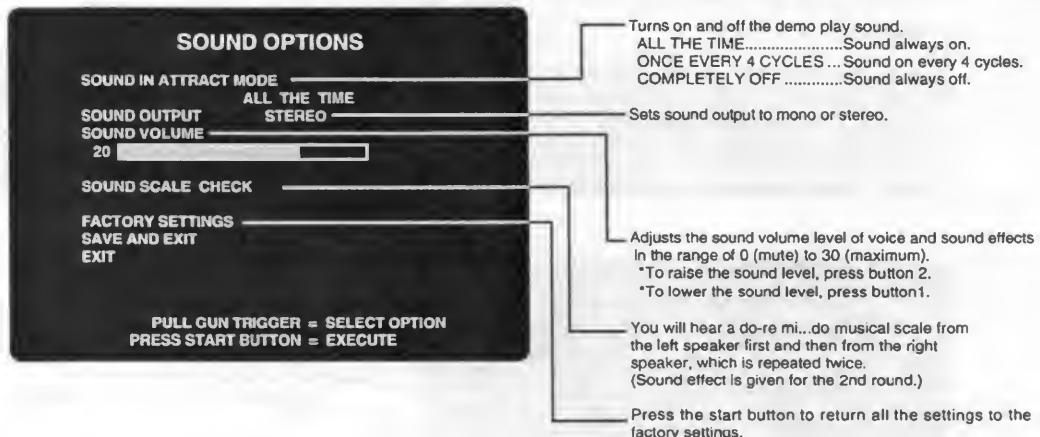
\*If "BAD" is indicated, turn off the power switch and turn it on again. If "BAD" still appears, write down the ROM number. Immediately turn off the main power switch, unplug the power cord and contact your nearest dealer.

## SOUND OPTIONS

### Setting the sound options

■ This screen is used to adjust sound settings and to check them.

Select an item by moving the Trackball up and down and modify its setting by pressing button 1 or button 2. To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and press the Start Button.



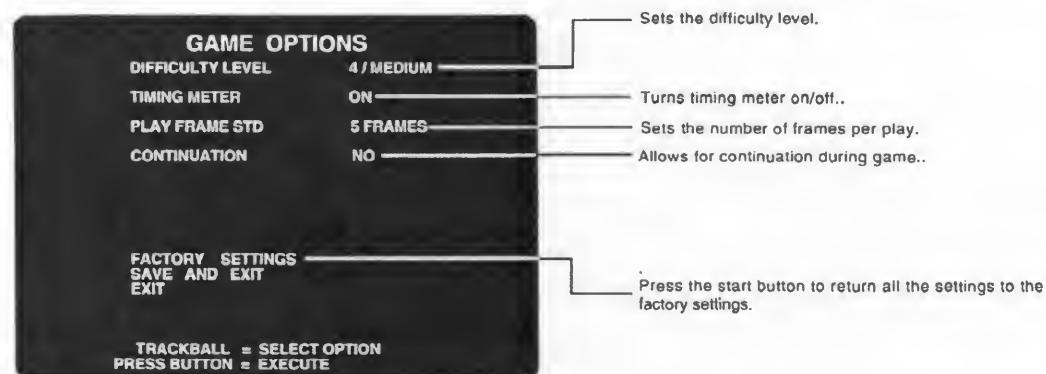
## GAME OPTIONS

### Setting the game options

■ This screen is used to check game settings and to adjust them.

Select an item by moving the Trackball up and down and change its setting by moving it right and left.

To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and press the Start Button.



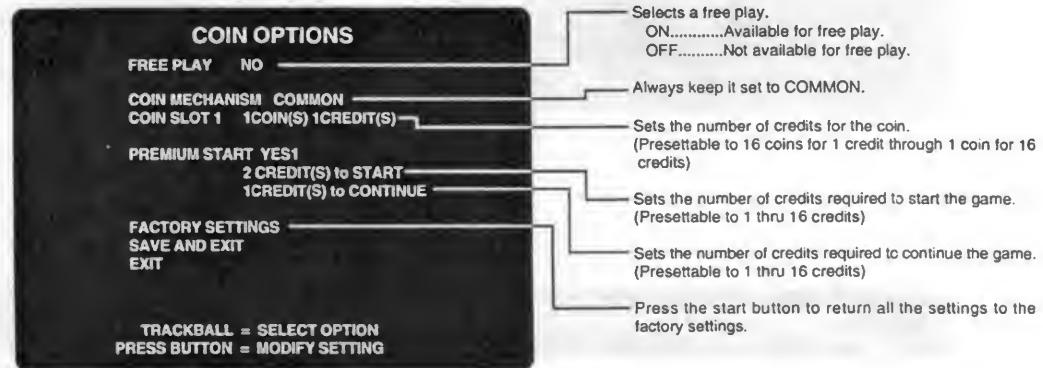
## COIN OPTIONS

### Setting the coin options

- This screen is used to check game play fee settings and to adjust them.  
Select an item by moving the Trackball up and down and change its setting by moving it right and left.  
To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and press the Start Button.



- The coin setting options are not displayed when "FREE PLAY" is set to "YES".  
In such case, remember, the games will be free.



## 4 How to Play

---

"The Simpsons Bowling" is a bowling game starring the Simpsons and four other Springfield residents as the players. The game allows up to four characters to compete in either Standard or Spares bowling using a trackball and select buttons. The controls correspond to a variety of trackball units.

### ■ How to play -----

- 1 Put two to eight coins in the machine and press the Start Button. Factory setting is two coins per player for each game. Then select the number of players to play depending on the number of credits available.
- 2 Select the type of game you wish to play. To do this, move the Trackball up or down and press an button. If no selection is made within 15 seconds the Standard Game will automatically be selected.

#### •Standard Game

In this mode, standard bowling scoring applies. Players can score up to 300 points in the 10 frames. Players can earn Special Balls for scoring three consecutive strikes.

#### •Spares Game

The Spares game mode consists of ten frames each with a different pre-set spare configuration. When a spare is converted, the player is awarded imaginary money. This game requires some strategy and a little luck to win. It is the player that makes the most money, not necessarily the most spares, that will win. A Double Chance may occur to assist a troubled player, by doubling the money value of the next spare.

- 3 Select the type of control scheme you prefer. To do this, move the Trackball up or down and press any button. If no selection is made within 15 seconds the Normal Controls will automatically be selected.

#### •Normal Controls

Normal controls challenge the player with the use of a Timing Meter and buttons. With this Timing Meter comes the possibility of making an early or late release. These are treated the same as a gutter ball. The Timing Meter itself allows the player to choose when the ball is released.

#### •Easy Controls

Easy controls allows the player to just roll the Trackball to start the approach. There is no timing meter; there are no early or late releases.

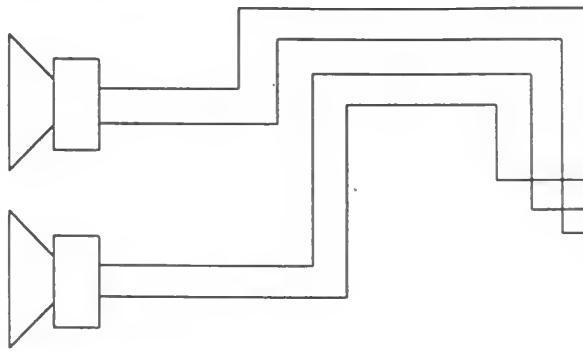
- 4 Select your character by rolling the Trackball up and down and pressing any Button. Each character has different attributes. If no selection is made within 15 seconds the highlighted character will automatically be selected.
- 5 The game starts with the first player walking up to bowl. Move the Trackball left or right to position the character. Lock in the position by pressing any Button. Next, the curve function will appear, move the Trackball left or right to determine how much curve there will be. Again, press any Button to lock in the curve.
  - a) For Normal Mode, next will come the Timing Meter, a button icon, and a start approach signal. To start the approach, press any Button. The character will automatically start the approach. Roll the Trackball when the Timing Meter is in the green and says ROLL NOW. One can also tell when to roll the ball by watching the character's position. When the character's ball is closest to the floor, roll the Trackball. When rolling the Trackball, how straight and how hard the Trackball is rolled will determine the accuracy of the shot. If a player rolls the Trackball too soon, an early release will occur. If the player rolls the Trackball too late, a late release will occur. Early and Late Releases will be counted as gutter balls.
  - b) For Easy mode, next will come a start approach signal, with a Trackball icon. Simply roll the Trackball to start the approach. How straight the roll is and how fast the Trackball is rolled will determine how accurate and how fast the bowling ball will move down the lane. Late and early releases are not featured in this game. Gutter balls are still possible.
- 6 During a Standard Game, if a player gets three strikes in a row, a Special Ball is earned. These Special Balls offer somewhat better shots, but are not to be relied upon as sure strikes. Although they give the player a superior ball, timing and accuracy determine the final outcome.
- 7 During a Spares game, it is advisable to observe the top down view at the right hand corner of the screen. Using this feature allows the player to plan the shot. If more than one player is playing, and one player is hopelessly losing, an opportunity to catch up will appear. It is called the Double Chance. Double Chance will raise the stakes a little bit by doubling the share of next spare for the losing player.
- 8 Winning players whose score qualifies have the opportunity to enter their initials into the game. Choose the letters with the Trackball, and lock in that letter with a Select Button. There is a 30 second time limit.

## 5 Parts list

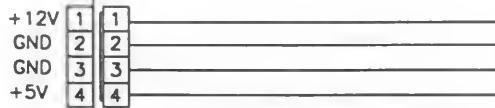


# 6 Wiring Diagram

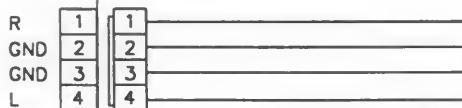
Full Range Speakers



Sony CDU76S  
CDrom Drive



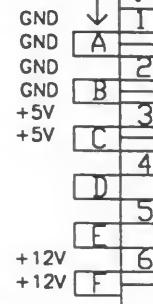
DC Power (CD-Rom)



CDDA IN

PWB301949A

PARTS SIDE  
SOLDER SIDE



CN13  
1 L+  
2 L-  
3 R-  
4 R+  
Main  
Speakers  
+12V  
+12V

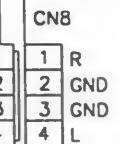
Coin Counter1  
Coin Counter2

8 J  
9 K  
10 L

11 M  
12 Red  
13 Green  
14 Blue  
15 Sync  
16 Video  
17 Gnd  
18 Services  
19 Test  
20 Coin 1  
21 Coin 2  
22 1P Start  
23 1P Shoot 1  
24 1P Shoot 2  
25 1P Shoot 1  
26 1P Shoot 2  
27 1P Shoot 1  
28 1P Shoot 2

12 N  
13 P  
14 R  
15 S  
16 T  
17 U  
18 V  
19 W  
20 X  
21 Y  
22 Z  
23 a  
24 b  
25 c  
26 d  
27 e  
28 f

CD SCSI  
Flat Cable



CN6  
1 +12V  
2 GND  
3 GND  
4 +5V

CN8

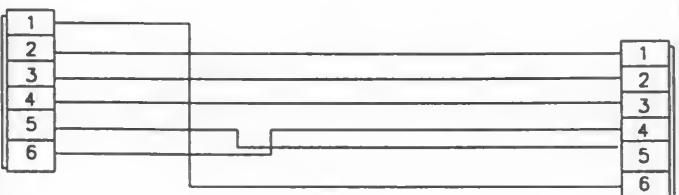
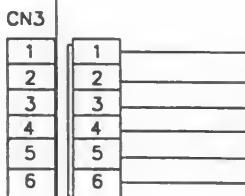
1 R  
2 GND  
3 GND  
4 L

1P Shoot 1  
1P Shoot 2  
1P Shoot 1  
1P Shoot 2  
1P Shoot 1  
1P Shoot 2  
1P Shoot 1  
1P Shoot 2

CN3

1 +5v  
2 1P-XA  
3 1P-XB  
4 1P-YA  
5 1P-YB  
6 GND  
7 GND

Trackball



PWB0000045241

